Ask Dr. Arwady

January 17, 2023
The Uganda Ministry of Health (MOH) declared a formal end of the Ebola outbreak on January 11, 2023.

- Ending entry screening at ORD for travelers from Uganda
- Ending public health monitoring of travelers from Uganda

<table>
<thead>
<tr>
<th>Total cases: 164</th>
</tr>
</thead>
<tbody>
<tr>
<td>142 confirmed</td>
</tr>
<tr>
<td>22 probable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total deaths: 77</th>
</tr>
</thead>
<tbody>
<tr>
<td>55 confirmed</td>
</tr>
<tr>
<td>22 probable</td>
</tr>
</tbody>
</table>

Fatality rate: 48.1%

Infections among Health Care Workers:
19 (7 deaths)

# Chicago travelers screened at O’Hare (cumulative since 10/6): 2,185

# travelers monitored by CDPH (cumulative since 10/6): 81
# Our local risk based on CDC COVID-19 Community Levels is: 

## Medium

<table>
<thead>
<tr>
<th></th>
<th>New cases per 100,000 population (last 7 days) [Goal is &lt;200]</th>
<th>New admissions per 100,000 population (last 7 days) [Goal is &lt;10]</th>
<th>Percent of staffed inpatient beds occupied by COVID-19 patients (last 7 days) [Goal is &lt;10%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Chicago</td>
<td>92</td>
<td>6.4</td>
<td>4.7%</td>
</tr>
<tr>
<td>Cook County</td>
<td>pending</td>
<td>13.8</td>
<td>6.1%</td>
</tr>
</tbody>
</table>

*Chicago metrics are calculated based on Chicago-level data.*  
*Cook County metrics are calculated by the CDC and posted on the [CDC Community Levels website](https://www.chicago.gov/city/en/sites/covid-19/home/community-transmission-and-risk.html).*  
*Data current as of 1/11/2023.*
Last week, 14% of U.S. Counties reported High COVID Community Level and 38% reported Medium Level.

Source: CDC
Variant Surveillance, Midwest Region
Continued evolution of more infectious Omicron subvariants

XBB is a recombinant (fusion) of 2 different BA.2 variants

<table>
<thead>
<tr>
<th>Variant</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>BQ.1.1</td>
<td>44.0%</td>
</tr>
<tr>
<td>BQ.1</td>
<td>23.4%</td>
</tr>
<tr>
<td>XBB.1.5</td>
<td>14.0%</td>
</tr>
<tr>
<td>BA.5</td>
<td>4.5%</td>
</tr>
<tr>
<td>BN.1</td>
<td>3.6%</td>
</tr>
<tr>
<td>XBB</td>
<td>3.5%</td>
</tr>
<tr>
<td>BA.2.75</td>
<td>2.2%</td>
</tr>
<tr>
<td>BA.5.2.6</td>
<td>0.8%</td>
</tr>
<tr>
<td>BF.11</td>
<td>0.4%</td>
</tr>
<tr>
<td>BA.2</td>
<td>0.4%</td>
</tr>
<tr>
<td>BA.4.6</td>
<td>0.2%</td>
</tr>
<tr>
<td>BA.2.75.2</td>
<td>0.1%</td>
</tr>
</tbody>
</table>

Collection date, week ending

Variant Surveillance, United States

United States: 1/8/2023 – 1/14/2023 NOWCAST

XBB.1.5

Regional proportions from specimens collected the week ending 1/14/2023

US Territories not shown are included in HHS regions:
PR, VI - Region 2
AS, FM, OU, MH, MP, PW - Region 9

Updated January 13, 2023

Lineages called using pangolin v4.1.3, pangolin-data v1.17 and usher v0.5.4.
Since the Omicron variant became dominant in Chicago: **Unvaccinated Chicagoans** have been **almost three times** as likely to be hospitalized with COVID-19 than **Up-to-Date (Vaccinated and Boosted) Chicagoans**
Higher Updated Booster Coverage among Chicagoans than Nationwide Estimates. Over 529,000 doses have been administered to Chicagoans since authorization.

<table>
<thead>
<tr>
<th>People with an Updated (Bivalent) Booster Dose</th>
<th>Percent of US Population (As of 1/12/23)</th>
<th>Percent of Chicago Population (As of 1/11/23)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population ≥ 5 years</td>
<td>15.9%</td>
<td>19.6%</td>
</tr>
<tr>
<td>Population ≥ 12 years</td>
<td>17.1%</td>
<td>20.3%</td>
</tr>
<tr>
<td>Population ≥ 18 years</td>
<td>18.2%</td>
<td>21.3%</td>
</tr>
<tr>
<td>Population ≥ 65 years</td>
<td>39%</td>
<td>38.9%</td>
</tr>
</tbody>
</table>

National data as of 1/12/2023.
Chicago data reported to I-CARE as of 1/11/2023.
Overall, 28% (+1%) of Eligible Chicagoans have received an updated, Fall 2022 COVID booster

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>No. of Chicagoans eligible for updated vaccine (est.)*</th>
<th>No. of eligible who received updated vaccine</th>
<th>Percent eligible who have received updated vaccine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latinx</td>
<td>552,595</td>
<td>105,182</td>
<td>19.0%</td>
</tr>
<tr>
<td>Black, non-Latinx</td>
<td>427,018</td>
<td>102,477</td>
<td>24.0%</td>
</tr>
<tr>
<td>White, non-Latinx</td>
<td>612,424</td>
<td>252,317</td>
<td>41.2%</td>
</tr>
<tr>
<td>Asian, non-Latinx</td>
<td>142,843</td>
<td>45,219</td>
<td>31.7%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age Group</th>
<th>No. of Chicagoans eligible for updated vaccine (est.)*</th>
<th>No. of eligible who received updated vaccine</th>
<th>Percent eligible who have received updated vaccine</th>
</tr>
</thead>
<tbody>
<tr>
<td>05-11 yrs</td>
<td>99,707</td>
<td>15,715</td>
<td>15.8%</td>
</tr>
<tr>
<td>12-17 yrs</td>
<td>127,424</td>
<td>19,859</td>
<td>15.6%</td>
</tr>
<tr>
<td>18-29 yrs</td>
<td>356,183</td>
<td>62,513</td>
<td>17.6%</td>
</tr>
<tr>
<td>30-39 yrs</td>
<td>354,624</td>
<td>94,448</td>
<td>26.6%</td>
</tr>
<tr>
<td>40-49 yrs</td>
<td>276,978</td>
<td>73,184</td>
<td>26.4%</td>
</tr>
<tr>
<td>50-59 yrs</td>
<td>254,834</td>
<td>77,071</td>
<td>30.2%</td>
</tr>
<tr>
<td>60-69 yrs</td>
<td>216,888</td>
<td>89,549</td>
<td>41.3%</td>
</tr>
<tr>
<td>70-79 yrs</td>
<td>128,089</td>
<td>64,971</td>
<td>50.7%</td>
</tr>
<tr>
<td>80+ yrs</td>
<td>67,127</td>
<td>31,248</td>
<td>46.6%</td>
</tr>
</tbody>
</table>

Data reported to I-CARE through 1/11/2023. Number eligible includes Chicagoans aged 5 years or older who completed a primary series or received a monovalent booster dose at least 2 months prior to 1/7/2023.
Let’s talk about:

VAERS: Vaccine Adverse Event Reporting System

www.vaers.hhs.gov

- VAERS is one of the many safety monitoring systems to help detect possible safety signals for vaccines as early as possible and to facilitate further investigation as appropriate.
- VAERS is co-managed by the Centers for Disease Control and Prevention (CDC) and the U.S. Food and Drug Administration (FDA).
- When evaluating data from VAERS, it is important to note that for any reported event, no cause-and-effect relationship has been established. The report of an adverse event to VAERS is not documentation that a vaccine caused the event.
- VAERS is not designed to determine if a vaccine caused a health problem, but is especially useful for detecting unusual or unexpected patterns of adverse event reporting that might indicate a possible safety problem with a vaccine.
- This way, VAERS can provide CDC and FDA with valuable information that additional work and evaluation is necessary to further assess a possible safety concern.

https://www.cdc.gov/vaccinesafety/ensuringsafety/monitoring(vaers/index.html
Vaccine Adverse Event Reporting System (VAERS)

Top 6 Things to Know About VAERS

1. VAERS is a national vaccine safety surveillance program that helps to detect unusual or unexpected reporting patterns of adverse events for vaccines.

2. VAERS is a passive surveillance system, meaning it relies on people sending in reports of their experiences after vaccination.

3. VAERS accepts reports from anyone, including patients, family members, healthcare providers, and vaccine manufacturers.

4. Healthcare providers and vaccine manufacturers are required by law to report certain events after vaccination.

5. VAERS is not designed to determine if a vaccine caused or contributed to an adverse event. A report to VAERS does not mean the vaccine caused the event.

6. If VAERS detects a pattern of adverse events following vaccination, other vaccine safety monitoring systems conduct follow-up studies.
VAERS Strengths

- VAERS accepts reports from anyone. This also allows VAERS to act as an early warning system to detect rare adverse events.
- VAERS collects information about the vaccine, the person vaccinated, and the adverse event. Scientists obtain follow-up information on serious reports.
- All data (without identifying patient information) are publicly available.
VAERS Limitations

- VAERS is a passive reporting system, meaning that reports about adverse events are not automatically collected. Instead someone who had or is aware of an adverse event following vaccination must file a report.

- VAERS reports are submitted by anyone and sometimes lack details or contain errors.

- **VAERS data alone cannot determine if the vaccine caused the reported adverse event.**

  This specific limitation has caused confusion about the publicly available data, specifically regarding the number of reported deaths. In the past there have been instances where people misinterpreted reports of death following vaccination as death caused by the vaccines; that is a mistake.

  VAERS accepts all reports of adverse events following vaccination without judging whether the vaccine caused the adverse health event. Some reports to VAERS might represent true vaccine reactions, and others might be coincidental adverse health events not related to vaccination at all.

  Generally, a causal relationship cannot be established using information from VAERS reports alone.

- The number of reports submitted to VAERS may increase in response to media attention and increased public awareness.

- It is not possible to use VAERS data to calculate how often an adverse event occurs in a population.
• Info collected by VAERS can provide early warning of a potential safety problem with a vaccine. Patterns of adverse events, or unusually high number of adverse events reported, are called “signals.”

• If a signal is identified through VAERS, further studies help determine if the signal represents an actual risk. In addition to looking at large data sets, further studies are done in safety systems like:
  • CDC’s Vaccine Safety Datalink (VSD)
  • Clinical Immunization Safety Assessment (CISA) project
Vaccine safety

We have more evidence than for any other vaccine or disease in the history of humanity that the benefits of COVID-19 vaccines greatly outweigh the risks.

• But there are people who continue to worry that vaccines are seriously harmful and even killing people.

• Let’s play this out: if this were true, we would expect those who are vaccinated for COVID to be more likely to die than those who are unvaccinated.

• In fact, the opposite is true.

For more discussion: yourlocalepidemiologist@substack.com
Chicago data: COVID-19 deaths

Since the Omicron variant became dominant in Chicago, unvaccinated people had a 2.5x higher risk of dying from COVID-19 compared to fully vaccinated people.

Since the Omicron variant became dominant in Chicago, unvaccinated people had a 5.3x higher risk of dying from COVID-19 compared to people who were boosted.
Let’s look at **ALL deaths**: Vaccines save lives (not just in Chicago)

All deaths (COVID, car accident, stroke, etc), age-adjusted—doesn’t matter if with/from COVID.

Over time, impact has changed due to increased vaccination rates, survivor bias, infection-induced immunity
We have *not* seen excess deaths (deaths above expected baseline) even in 18-49 year-olds as a result of the COVID vaccine; we *have* seen excess deaths as a result of COVID.

Excess deaths started in **spring 2020** at the beginning of the pandemic (before vaccines were available).

Excess deaths *tightly track with COVID deaths*, even for this age group.
Let’s look specifically at diseases of circulatory system (heart attacks, blood clots) in 18-39 year olds
Comparing risk of adverse events after vaccine and after SARS-CoV-2 infection


Infected with SARS-CoV-2 Vaccinated
Safety signals

• No medical intervention where risk of side effects is zero. But risk of serious side effects is extremely small—and the benefits of the vaccine far outweigh those risks.

Legitimate safety signals
• Serious allergic reactions/anaphylaxis
  • 5 in every 1 million vaccine doses
  • Monitor for allergic reaction after vaccination

• J&J vaccine specifically: Specific type of blood clot with low platelets (thrombosis with thrombocytopenia)
  • 4 in every 1 million vaccine doses
  • Now recommend mRNA vaccines over J&J

• Myocarditis (inflammation of heart muscle) among young males
  • 10 in every 100,000 vaccine doses (more often after second shot)
  • Still much less likely and less severe than risk of myocarditis from virus itself in this age group
  • Extra dosing and safety studies with this focus completed before vaccine for younger children rolled out

Other safety signals investigated but not sustained
Safety signal: ? stroke risk for people age 65+ who received Pfizer bivalent vaccine

- CDC and FDA look at large databases with focus on this question:
  - Medicare (5 million Pfizer bivalent doses): no increased risk
  - VA (millions of veterans): no increased risk

- Researchers look at this question in other countries:
  - Israel: no increased risk
  - Other European countries: no increased risk
Still learning about longer-term impact of COVID infection: goal of avoiding infection remains

- Excess all-cause mortality related to cardiovascular complications in patients after COVID-19 infection (Italy/Spain)

- Increase in excess mortality after infection (Singapore)

- People infected with SARS-CoV-2 had 3 times the risk of dying over the following year compared to those who remained uninfected. For those age 60+, increased mortality persisted until end of first year after infection. (Lancet)
Vaccines saved more than 20 million lives (estimated) in the first year across the globe.

Just in the U.S., COVID vaccines prevented

- 18.5 million additional hospitalizations
- 3.2 million additional deaths

Figure from Watson et al., (2022) Global impact of the first year of COVID-19 vaccination: a mathematical modelling study. Source here.

Discussion: yourlocalepidemiologist@substack.com
Previously vaccinated Chicagoans age 6 months+ are eligible for the bivalent booster and the best protection against Omicron.
GET YOUR UPDATED
COVID BOOSTER &
FLU SHOT AT HOME

In-home vaccination is available to all Chicago households at no cost. Up to 10 people can be vaccinated, so invite your family, friends, or neighbors to get vaccinated together.

TO REGISTER FOR AN APPOINTMENT
CALL 312.746.4835 OR VISIT OR CHICAGO.GOV/ATHOME
How to get your FREE at-home COVID-19 tests

1. VISIT COVIDtests.gov

2. Review and place your order

3. Enter contact and shipping info

Or you can call 1-800-232-0233
TAKE ACTION IF YOU TEST POSITIVE FOR COVID-19

**DAY 1-5**
Stay home:
- Everyone - regardless of vaccination status - should stay home and away from others (isolate).

**People at high risk for severe illness:**
Talk to your doctor about treatment

**DAY 6-10**
Wear a mask:
- If you take 2 antigen tests 48 hours apart and both are negative, you may remove your mask sooner
- Avoid people at high risk of getting very sick

**DAY 6 OR LATER**
End isolation:
- If you never had symptoms OR symptoms are improving and are fever-free for 24 hours.

Find testing resources and the latest guidance at [chicago.gov/covidtest](http://chicago.gov/covidtest)
VAX & PAX lovid

If you’re at high risk for severe illness, vaccines are your best protection against COVID-19. But if you do test positive, TREATMENTS ARE AVAILABLE.

PAXLOVID, for example, is an oral antiviral therapy for the treatment of mild to moderate COVID-19.

Individuals ages 12 and up who are at high risk of developing severe illness, are eligible. Ask a healthcare provider if medications to treat COVID-19 are right for you.

More info at: Chi.gov/therapeutics
TREAT COVID-19

• **The Rapid Response Evaluation And Treatment of COVID-19** for long term care residents, funding by CDC.

• **Available Services**
  - On-site or telehealth consultation and drug interaction review with a licensed medical provider
  - Medication courier service
  - On-site IV administration of remdesivir
  - Decrease intra-facility transmission of current outbreak through point-of-care COVID-19 testing and vaccination administration.

• **NO COST TO FACILITY OR RESIDENTS**

If you or your loved one live in a **nursing home** within the city of Chicago and recently tested positive for COVID-19, reach out to our local TREAT COVID-19 program at (708)-600-4233 or Chicago-COVID19@CIMPAR.com.
Saturday, January 21 • 9am-2pm

Olive Harvey College • 10001 S. Woodlawn Ave.

Register at: rebrand.ly/Olive-Harvey

The new COVID-19 bivalent booster will be available!

Types of vaccines: Flu, Moderna primary series and bivalent boosters (6 months through 5 years), Pfizer primary series and bivalent boosters (6 months and older).

WALK-INS WELCOME!
Need a vaccine or a booster? Have questions?

visit

CHI.GOV/COVIDVAX

or call

312-746-4835